QUANTIFI PHOTONICS®
A Teradyne Company

Power

1410
OPTICAL
POWER METER

PRELIMINARY SPECIFICATION SHEET

quantifiphotonics.com

Quantifi Photonics' Power 1410 optical power meter provides fast monitoring of signal power from -60 to +10 dBm and broad wavelength range of 1250 to 1650 nm.

It provides unrivalled channel density with up to 288 parallel channels in a single 1U rack-mountable instrument.

24 to 288 parallel channels

Customize your instrument with 24 to 288 parallel optical power meters for high-channel count applications.

Single logarithmic detector

Use of a logarithmic detector eliminates the gain jumps exhibited by power meters with multi-stage linear amplifiers. Generate consistent and reliable measurements at all power levels.

Data Logging Capability

Data logging of up to 1024 samples per channel, so you can capture transient events with ease.

Simple, intuitive operation with CohesionUI™

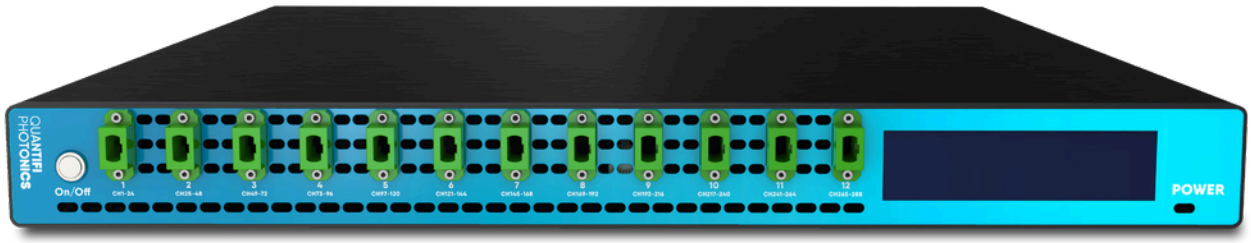
Control the Power1410 from our modern web-based user interface and view up to 288 channels simultaneously.

- Fiber optic manufacturing test.
- Power measurement integration for automated test systems.
- Fiber optic laser test and characterization.
- General and versatile R&D and production tool.

Integrated hardware triggering

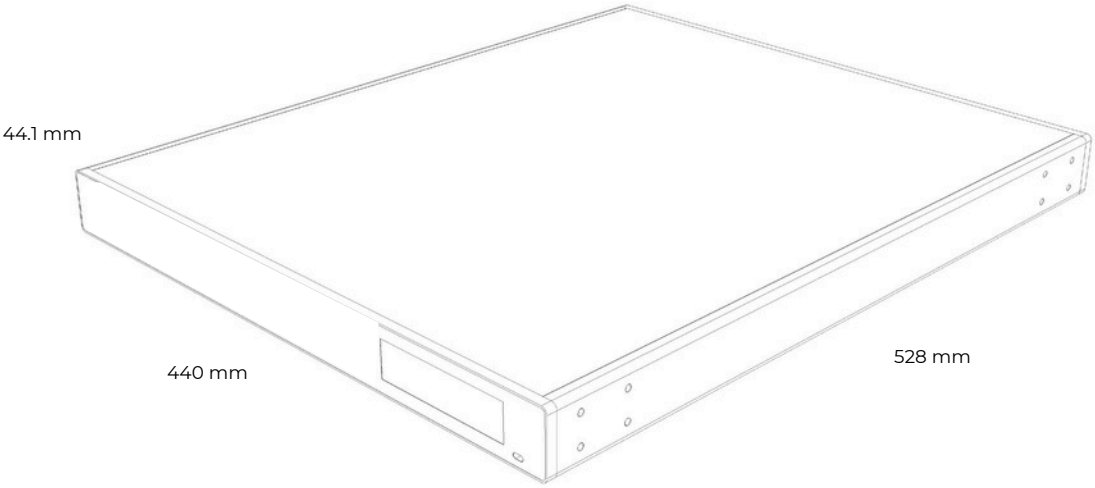
The Power 1410 has integrated hardware triggering capabilities that allow the user to synchronize a variety of instruments through the trigger input. This offers a number of advantages over more traditional software-initiated measurements.

- True parallel measurements of multiple devices under test (DUT) allows you to scale your manufacturing and decrease the test time per DUT.
- Extremely low latency allows you to capture fast events or measure your DUTs very quickly.
- Precise timing alignment between optical and electrical modules gives you control of trigger events to occur exactly when required.

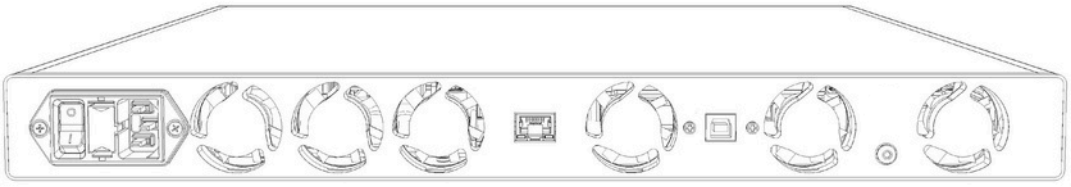


Power-1410-288-MTP-EPIQ

Instrument dimensions

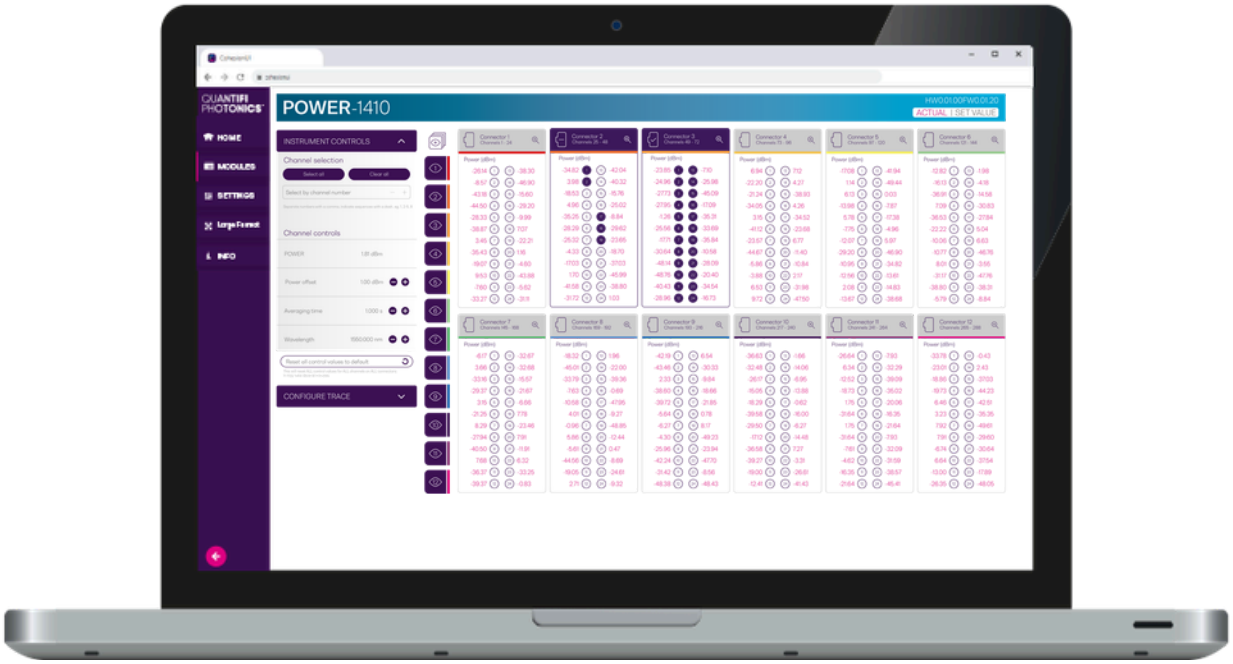


Rear panel connections

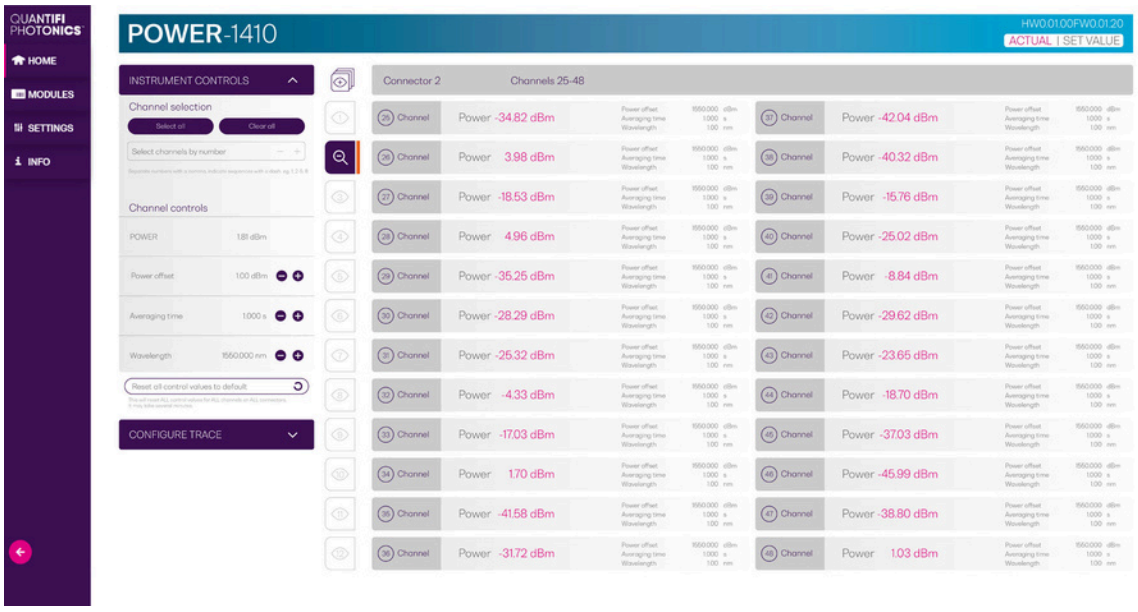


Simple, Intuitive Control with COHESIONUI™

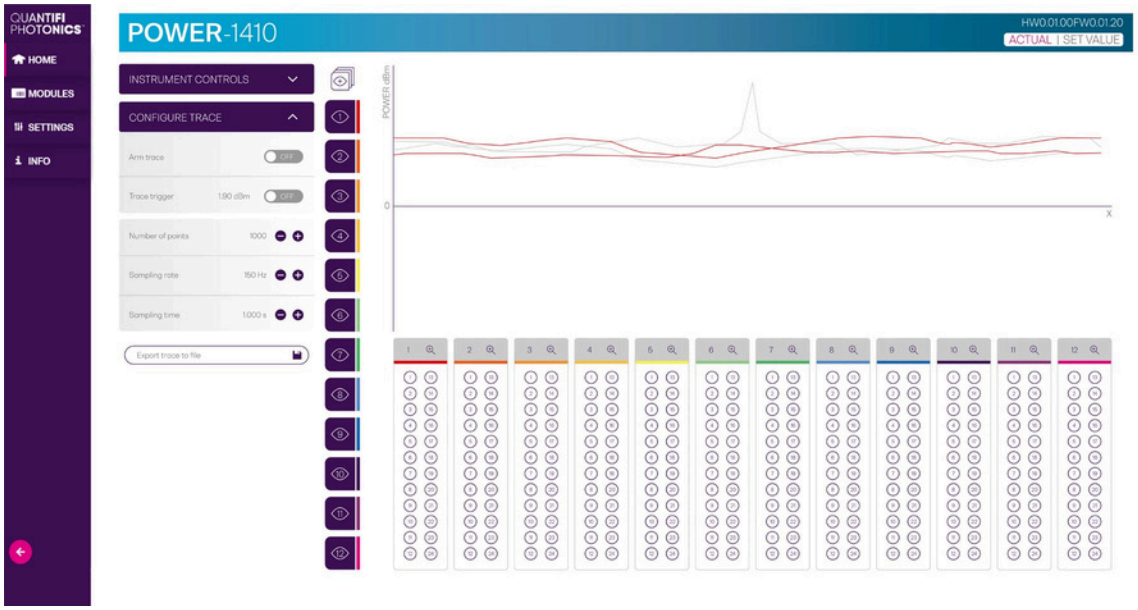
COHESIONUI makes it simple to control our instruments from a PC. Its cutting-edge design offers a sleek modern interface, customizable views and remote network access.



CohesionUI displaying 288 simultaneous optical power measurements.



CohesionUI displaying a a single connector with 24 optical power measurements.



CohesionUI displaying channel traces.

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POWER 1410 TECHNICAL SPECIFICATIONS

General Specifications	EPIQ
Dimensions (HxWxD)	44.1 x 440 x 528 mm | 1.7 x 17.3 x 20.8 inches
Weight	~ 3 kg | ~6.6 lbs
Operating temperature range	5 °C to 45 °C | 41 °F to 113 °F
Storage temperature range	-40 °C to 70 °C | -40 °F to 158 °F

Model Number	1410
Number of channels	24, 48, 72, 96, 120, 144, 168, 192, 216, 240, 264, 288
Optical connectors	MTP Elite Male, key up, SMF Fiber, APC
Sensor	InGaAs
Wavelength range	1250 nm to 1650 nm
Power	- 60 dBm to + 10 dBm
Damage level	+ 12 dBm
Uncertainty 2,3,4	± 0.29 dB (Typical) | ± 0.50 dB (Max)
Linearity 2,4	± 0.1dB -40 to 0 dBm; ±0.2dB -50 to -40 dBm 100 µs to 10 s
Averaging time	1 to 1024 samples per channel on 3 channels in each block of 24 channels.
Data logging capability	The channels with TRACE are configurable in software.
External trigger	Female SMA, 3.3V TTL

Notes
1. Specifications are valid at 23 °C ± 3 °C.
2. +10 dBm to -40 dBm, 23 °C.
3. Excluding connectors.
4. At calibration wavelengths.
5. Wavelength 1550 nm ± 30 nm, standard single-mode fiber, angled connector 8°, T=23 °C ± 5 °C.

ORDERING INFORMATION

POWER - 1410 - XXX - XXXX - EPIQ

Connector type
MA24 = MTP-24 Elite APC Male

Number of power meter channels
24, 48, 72, 96, 120, 144, 168, 192, 216, 240, 264, 288

WARRANTY INFORMATION

This product comes with a standard 1 year warranty.

EXTENDED WARRANTIES AND CALIBRATION PLANS

With an **extended warranty and calibration plan** you'll spend more time focused on your priorities and less time worrying about maintenance.

Add a **3 or 5 year extended warranty** when you purchase your Quantifi Photonics instruments.

Guarantee performance

Ensure your equipment is operating at the best it can be for reliable and accurate results.

Lower cost of ownership

Lock in savings and maximise your testing budget with a lower base cost of ownership.

Peace of mind

Spend less time worrying about maintenance and more on generating results.

CALIBRATION PLANS FOR ADDITIONAL DISCOUNTS

Order a **calibration plan** when purchasing your Quantifi Photonics instruments and get additional discounts.

10% Discount — On calibrations ordered at the time of purchase.

25% Discount — Add on an extended warranty and receive a 25% discount on calibrations.

Over time and with regular use, all optical parts and connectors require re-calibration and maintenance to guarantee accurate and reliable performance. We recommend Quantifi Photonics optical instruments are re-calibrated every 12 months. With an instrument calibration performed by Quantifi Photonics technicians you receive:

- Comprehensive calibration to factory specifi cations
- End-to-end inspection to ensure all instrument functions are working and connectors are clean
- Firmware, soft ware and documentation updates
- Certifi cate of calibration which includes detailed test results

How to do I secure my extended warranty or calibration plan?

Contact your Quantifi Photonics sales representative or email **sales@quantifiphotonics.com**

Extended warranties and calibration plans must be ordered at the time of purchase and are available only for Quantifi Photonics' products. The 25% calibration discount only applies to calibrations while the product is covered by the extended warranty period.

Our portfolio of optical & electro-optical test modules is rapidly expanding to meet a wide range of customer requirements and applications.

For more details visit **quantifi photonics.com/products**

Tunable Laser Sources

Versatile telecom laser sources with full tunability across C or L bands. Narrow 100 kHz linewidth, up to 16.5 dBm of power, optional whisper mode to disable frequency dither.

Fixed Wavelength Laser Sources

Highly-customizable DFB or FP laser sources available in a wide range of wavelengths and powers up to 24 dBm. Supports SMF, MMF and PMF.

Swept, Tunable Continuous Wave Laser

Swept, tunable continuous wave (CW) laser source with 0.01 dB power stability and 400 nm/s high-speed scan rate for R&D and production testing.

Superluminescent Diode Broadband Light Source

Super-luminescentLED light source with high output power, large bandwidth and low spectral ripple and various wavelengths.

Erbium-Doped Fibre Amplifi er (EDFA)

High power Erbium-Doped Fiber Amplifi er for signal power amplifi cation in C and L bands with various control modes, including automatic gain control.

Variable Optical Att enuator (VOA)

Fast att enuation speed with low insertion loss and built-in power monitoring. Operates in fi xed att enuation or constant output power modes. Support SMF, MMF and PMF.

Polarization Controller & Scrambler

High-speed automated polarization control with broad wavelength coverage from 1260nm to 1650nm, low insertion loss and back refl ection. Full remote control via intuitive GUI, LabVIEW or SCPI.

Optical Power Meters

Fast terminating or inline monitoring of optical signal power from -60 to +10 dBm across 750 – 1700 nm wavelengths. Model with logarithmic analog output for applications such as silicon photonics fi ber alignment.

Optical Spectrum Analyzer (OSA)

Cost-eff ective, spectral measurement in a compact module with built-in analysis for: SMSR, OSNR & spectral width. Targeted wavelengths for specifi c applications in O band, C band & L band.

Optical-to-Electrical Converter

High bandwidth, broadband O-to-E converter. Available in a range of confi gurations; choose from 1 or 2 channels, AC or DC coupling and various conversion gain and operating wavelength ranges.

Digital Sampling Oscilloscope (DSO)

Digital equivalent-time sampling oscilloscope (DSO) with high-quality precision timebase and low jitt er mode, available in 1 or 2 channels in a compact benchtop instrument.

Bit Error Rate Tester (BERT)

4 or 8-channel Pulse Patt ern Generator and Error Detector at rates up to 29 Gbps for the design, characterization and production of optical transceivers and opto-electrical components.

Photonic Doppler Velocimeter (PDV)

Purpose-built module for Photonic Doppler Velocimetry (PDV). A circulator, two VOAs and a passive coupler all built into one compact module.

Optical Switch

Proven reliability and fast switching time. Wide variety of switch confi gurations: 1x4, 1x16, 16x16 and more. Models support SMF, MMF and PMF.

Photocurrent Amplifi er

Versatile photodiode amplifi er to measure photocurrent in photonic integrated circuit (PIC) applications. Digital and analog measurement.

Passive Component Integration

Integrate passive optical components of your choice such as WDM couplers, splitt ers, band-pass fi lters, PM beamsplitt ers and circulators. SMF, MMF and PMF.

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Test. Measure. Solve.™

Quantifi Photonics provides test solutions to help customersunlock scalable and cost-effective high-volume manufacturing of photonicintegrated circuits (PICs), co-packaged optics and pluggable optics.The company's portfolio includes a wide range of photonic test instruments, and digital sampling oscilloscopes, available as benchtop or the industry-standard PXI format to support cost-effective, high-throughput design verification testing and high-volumemanufacturing.

To fi nd out more, get in touch with us today.

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